

Serial No.: 09/511,265
Examiner: Shick C. Hom

In the claims:

Please cancel claims 2, 8 and 12-15.

Please add new independent claims 21 and 22.

Please amend the claims as follows:

Claim 1 (currently amended): In a data switch including a plurality of interface modules wherein each of at least two of the plurality of interface module have a dissimilar communication medium, a method of forwarding a block of data comprising:

receiving a first packet in a first protocol via a first interface module of the plurality of interface modules;

translating the first packet into a generic format to create a generic packet having an associated descriptor, wherein the associated descriptor comprises a quality of service field for provisioning resources;

placing the generic packet into a receiving queue corresponding to a quality of service level of the generic packet;

passing the generic packet to an application according to the associated descriptor of the generic packet;

translating the generic packet into a second protocol to create a second packet at a second interface module; and

sending the second packet to an output port, wherein the first interface module and the second interface module are associated with dissimilar communication media.

Claim 2 (canceled)

Claim 3 (original): The method of claim 1 further comprising receiving at a forwarding queue the generic packet from the application, the forwarding queue corresponding to a quality of service level of the generic packet.

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Claim 4 (previously presented): The method of claim 1, wherein the sending comprises sending the second packet to a backplane, the second packet having a port address within a range reserved for a destination port.

Claim 5 (original): The method of claim 4, wherein the destination port is selected from a group consisting of known internal unicast ports, known internal multicast ports, known external multicast ports, and dynamic multicast ports.

Claim 6. (currently amended): A switching system comprising:

an input port receiving a first packet in a first protocol from a first communication medium;

an input driver coupled to the input port for translating the first packet into a generic format to create a generic packet having an associated descriptor wherein the associated descriptor comprises a quality of service field for provisioning switching system resources;

a receiving queue for receiving the generic packet, the receiving queue corresponding to a quality of service level of the generic packet;

means for passing the generic packet to an application in conformance with the associated descriptor;

means for invoking the application for processing the generic packet by the application transparently of the first protocol;

means for receiving from the application the generic packet;

an output driver for translating the generic packet into a second protocol to create a second packet; and

an output port coupled to the output driver for transmitting the second packet to a second communication medium, wherein the first communication medium and the second communication medium are dissimilar.

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Claim 7 (original): The switching system of claim 6, wherein the input and output drivers register with a generic forwarding interface, the generic forwarding interface being located between the drivers and the application.

Claim 8 (canceled)

Claim 9 (original): The switching system of claim 6 further comprising a forwarding queue for receiving the generic packet from the application, the forwarding queue corresponding to a quality of service level of the generic packet.

Claims 10-15 (cancelled)

Claim 16 (currently amended): The method for forwarding the a block of data of claim 1, wherein the switch resources comprises a CPU, a backplane, a communication channel and a system buffer.

Claim 17 (currently amended): The method for forwarding the a block of data of claim 1, wherein the associated descriptor further comprises a buffer descriptor for provisioning system buffer resources.

Claim 18 (currently amended): The method for forwarding the a block of data of claim 1, wherein the buffer descriptor further comprises a buffer control word, wherein the buffer control word specifies a number of bytes of the block of data in the system buffer.

Claim 19 (currently amended): The method for forwarding the a block of data of claim 1, wherein the associated descriptor comprises output port information.

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Claim 20 (currently amended): The method for forwarding the a block of data of claim 19, wherein the output port information comprises the physical port address of the output port.

Claim 21 (new): In a data switch including a plurality of interface modules wherein each of at least two of the plurality of interface module have a dissimilar communication medium, a method of forwarding a block of data comprising:

receiving a first packet in a first protocol via a first interface module of the plurality of interface modules;

translating the first packet into a generic format to create a generic packet having an associated descriptor, wherein the associated descriptor comprises a quality of service field for provisioning resources;

passing the generic packet to an application according to the associated descriptor of the generic packet;

translating the generic packet into a second protocol to create a second packet at a second interface module;

sending the second packet to an output port, wherein the first interface module and the second interface module are associated with dissimilar communication media; and

receiving at a forwarding queue the generic packet from the application, the forwarding queue corresponding to a quality of service level of the generic packet.

Claim 22 (new): In a data switch including a plurality of interface modules wherein each of at least two of the plurality of interface module have a dissimilar communication medium, a method of forwarding a block of data comprising:

receiving a first packet in a first protocol via a first interface module of the plurality of interface modules;

translating the first packet into a generic format to create a generic packet having an associated descriptor, wherein the associated descriptor comprises a quality of service field for provisioning resources;

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passing the generic packet to an application according to the associated descriptor of the generic packet;

translating the generic packet into a second protocol to create a second packet at a second interface module;

sending the second packet to an output port, wherein the first interface module and the second interface module are associated with dissimilar communication media and further wherein the sending comprises sending the second packet to a backplane, the second packet having a port address within a range reserved for a destination port, said destination port being selected from a group consisting of known internal unicast ports, known internal multicast ports, known external multicast ports, and dynamic multicast ports.